

removed at first dressing; subsequently two metatarsal bones; but there yet remained an extensive and obstinate ulcer upon the external and inferior surfaces, extending back to the heel, measuring fifteen and a quarter inches in circumference, discharging from six to ten ounces of pus per day since the accident. Very painful, particularly during the night. The ankle-joint was healthy; muscles of proper consistence; skin appeared sound; the hair was as numerous and thrifty as upon the other leg. I recommended amputation of the leg, and accordingly proceeded to operate.

February 19, 1846, assisted by my father S. S. Butler, M. D., and Drs. Babcock, Cushman and Stone, and in the presence of several students, I performed the flap operation about the middle of the leg; the muscles and bones appeared to be perfectly sound. The two tibial, the peroneal, and one large cutaneous artery were ligatured. Upon loosening the tourniquet we were saluted with a torrent of blood little anticipated. Compression was instantly applied upon the femoral artery by means of the tourniquet, and before hemorrhage could be completely controlled, another was applied to the popliteal space. Upon close examination I found it to be venous as well as arterial blood gushing from every portion of the stump. We applied *twenty-seven* ligatures to both arteries and veins; four ligatures included several vessels each. We think we can safely estimate over forty arteries and veins *tied*, besides many smaller arteries arrested by torsion. The venæ comites were enlarged to nearly or quite double their natural calibre. The usual dressings were then applied and the patient put in bed. The wound healed by first intention, and patient dismissed the seventeenth day, with directions to use a spare diet, moderate exercise, and gentle laxatives if necessary.

March 15th. Was called; found him complaining of severe pain in the head, loss of appetite and great prostration; pulse 65. Right angle of the mouth and nostril of the same side elevated; cannot restore them to their proper positions by an act of the will; an incapacity to close the eyelids of the left eye. R.—Seton to left arm, blister to the back of the neck; drastic cathartic composed of calomel jalap and gamboge; frictions to extremities.

16th. Pain in the head somewhat abated; disfiguration of the face continues; repeat cathartic; blisters to the arms.

17th. An evident improvement. Slight pain in the head, but complains of pain in the back. Pediluvium and frictions to extremities.

18th. Much improved from yesterday. Free from pain. Appetite returning; volition extends to the muscles of the face; repeat blister to the neck.

23d. Found him still improving; face assuming more natural appearance; dismissed the patient with directions to take a light and spare diet.

I have seen Mr. H. from week to week to the present time. There yet remains a slight elevation of the angle of the mouth, and paralysis of the eyelids of his left eye. His health and strength are good. The case presents two important features—the extraordinary hemorrhage after amputation, and the train of symptoms which followed healing of the stump.

DOMESTIC SUMMARY.

Report upon the Hemostatic Virtues of the Brocchieri Water and Ergotine.—The *Southern Journal of Medicine and Pharmacy* (March and July, 1846) contains an interesting report by the editors, Drs. SMITH and SINKLER, on the hemostatic virtues

of the Brocchieri water and ergotine. We have not space for the experiments in detail, but must restrict ourselves to the results, and which, it will be perceived, accord with those of the Committee of the Virginia Medical Society, in our preceding number, p. 146.

"From the numerous experiments performed, and from the manner in which they were modified, as well as the care bestowed upon them, without reference to their favourable or unfavourable results, we are warranted in coming to the following conclusions:

"1st. That when Brocchieri Water, ergotine, or a watery emulsion of creosote, is applied to the divided artery of a sheep, it depends greatly, if not altogether, upon the manner in which the lint is applied to the wound on the artery, whether the hemorrhage is arrested or not. If it be placed immediately upon the orifice of the cut vessel, the success is certain; if, however, the vessel shrink from contact with the lint, the animal is almost certain to bleed to death. The former is shown by the experiments 4 and 5 of the first report, and by 3, 5 and 6 in the present one; and the latter, by experiments 1, 2, and 4, in this report.

"2d. That by a small pledget of *simple lint*, placed immediately upon the incision made into a sheep's carotid artery, that the hemorrhage is arrested in a few moments; and after a lapse of from twenty to thirty minutes, the animal may be let loose, without any apprehension of the return of the hemorrhage. If the lint be applied so as not to touch the wound in the artery, all effort to arrest the hemorrhage becomes ineffectual; this is proved by reference to experiments 1, 2 and 3 of the first report, while experiments 7, 8 and 9 give evidence of what was first stated. From these results, it will be seen how many difficulties often attend the simplest experiments, and how important it is to leave no point, not the most apparently trivial, without close examination; it is true, it requires time and trouble, but both are more than compensated for, by a knowledge that we become in possession of truths that are important to ourselves and to others.

"3d. The sheep is an unfit animal to try the hemostatic power of substances, with reference to what their fitness may be in the case of the human subject; for although sheep will bleed to death by a wound in one of the larger arteries, still, by the application of a small pledget of lint, sustained with a little pressure *immediately upon the wound in the vessel*, the hemorrhage will cease, and the animal survive. The same we are convinced may be said of all like experiments upon the lower classes of animals, as in many of them the hemorrhage from the larger vessel will be arrested spontaneously; this is true of the dog; in fact, so far as our knowledge extends, the sheep is more readily bled to death than most any other of the quadrupeds. Furthermore, the blood of animals is more plastic, coagulating with far greater rapidity than that of man; and as the arresting of the hemorrhage in these experiments is dependent upon the formation of a clot around the opening and in the cavity of the vessel, it ought therefore to happen more readily in them than in man.

"4th. If the hemostatic virtues of the agents already alluded to, are to be correctly ascertained, it is only *by experiments upon the human subject*, and no value should be given to those made in any other way. Whether the Brocchieri water, ergotine and creosote will stand this test, we are not as yet prepared to say, although several experiments made with them have come to our notice, but they are of so contradictory a character, that no definite conclusion can be formed. These substances no doubt hasten the coagulation of blood, and may, under some circumstances, arrest hemorrhage coming from the smaller arteries; but in the case of the larger vessels, they are of no manner of use, at least not more so than the lint without them.

"The experiments on the human subject that have come to our notice are,—wound on the hand, oozing, some time after the operation of hydrocele; oozing from a tumour on the back;—tried with Brocchieri water. In the first case, there appeared to be no effect; in the last two, some slight effect; the oozing in the case of the hydrocele, although diminished, could not be arrested. In a case of hemorrhoids that was operated upon, application of the ergotine was made with apparently good effect. In two cases of operation for hydrocele, the emulsion of creosote was used; in one of them, the bleeding from the small vessels was

arrested; in the other no effect. So it is clear, that as yet, there is no danger of ligatures being supplanted by either of the above agents."

Excision of the Elbow-Joint in a case of Caries of the Articular Extremities of the Bones. An interesting case of this is recorded by Dr. GURDON BUCK, JR., in the *New York Journ. of Med.*, for July last. The subject of it was a steamboat fireman, 25 years of age, of temperate habits and good constitution, admitted into the New York Hospital, June 6th, 1844, with inflammation of the right elbow-joint of nearly two years' duration, which originated without injury or known cause. It commenced with a swelling between the olecranon and the outer condyle, attended with stiffness and slight pain. On the swelling being punctured, a glairy fluid with lumps of solid substance was discharged. With occasional interruptions, the patient has been able to use the limb, though the joint has continued stiff, and its motions have been impaired. Medical treatment has been employed for a year past, such as blisters and cupping, of which numerous marks are visible about the joint. Till recently, patient has suffered but little pain, and his general health has continued good.

On the 1st of July, when he came under Dr. Bilou, the condition of the limb was as follows:—A uniform swelling involves the elbow, tapering off to the middle of the forearm below, and of the arm above, where the limb becomes small and wasted. The prominences of the olecranon and condyles, as well as the anterior fold of the joint, are obliterated. The swelling is formed by thickening and induration of the soft parts, the integument covering which, particularly over the posterior part, has lost much of its suppleness and mobility. Pressure over the olecranon and condyles causes pain. Synovial fluid is discharged from two openings, one of which is situated at the outer edge of the ulna, three fingers' breadth below the olecranon, the other at an inch above the inner condyle; the former leads to rough bone at the head of the radius, the latter, though it extends more than an inch inwards, does not communicate with exposed bone.

The habitual position of the limb is that of incomplete extension. A slight degree of flexion from this position is admissible, as well as partial pronation and supination, all of which are attended with pain. No sensation of roughness is perceptible in performing these motions.

The surface of the swelling is pale, the temperature above that of the rest of the limb. Two issues have been established near the outer condyle since his admission, and an attempt made to preserve the limb flexed at a right angle, it being the most favourable position in which to allow ankylosis to take place. This, however, had to be abandoned in consequence of the increased pain and inflammation that followed.

Patient's general health is good, pulse sixty-two, tongue somewhat furred, bowels good.

July 25.—Preparatory to the operation to be performed this day, the issues have been allowed to heal up. The swelling about the joint has rather diminished.

The upper opening extends two inches downwards and outwards, and now communicates with denuded bone.

At a distance of two fingers' breadth above the condyles, the os brachii appears to be uneven and enlarged. The patient's general condition continues favourable; appetite good, and bowels regular.

Operation.—The tourniquet having been applied at the insertion of the deltoid muscle, and the patient placed in the recumbent posture, on his left side, with the head and shoulders elevated, and his back towards the operator, a longitudinal incision six inches in length, was made over the olecranon, extending to an equal distance above and below it, and penetrating to the bone. The triceps muscle and tendon thus split, were raised towards the outer condyle, care being taken to keep close to the bone and avoid dividing the connections of the tendon with the aponeurosis of the forearm. The same course was pursued in the dissection toward the inner condyle, the ulnar nerve being drawn inwards to prevent its being wounded. The integuments and subjacent aponeurosis were next raised on either side, below the olecranon, the olecranon itself denuded, and more than an inch of this process removed with the amputating saw. The edges of the wound being drawn forcibly to either side, the articular extremity of the os brachii

was detached from its connections by dividing the lateral ligaments and the muscles arising from the condyles, which allowed it to be projected from the surrounding soft parts, while a transverse section was made above the condyles, separating a portion of an inch and a half in length. The head of the radius was now ascertained to be rough and denuded, as well as the smaller sigmoid cavity in which it rotates upon the side of the ulna. The division of the annular ligament allowed the head to be cleared from the soft parts sufficient to excise it at its neck. An additional portion of the ulna, including the coronoid process and lesser sigmoid cavity, remained still to be excised, which was effected by carefully dissecting up the insertions of the brachialis anticus muscle as far as was necessary, and then making a section from before backwards, with a metacarpal saw applied just below the coronoid process. The rough angular edges of bone were then pared away. Several ligatures were applied to small vessels, and the edges of the wound brought together with seven sutures, between which adhesive straps were applied, passing half round the limb.

The diseased parts presented the following appearances. A grayish, jelly-like substance covered the synovial surfaces, being most abundant where the synovial membrane passes from the bone and lines the ligaments.

This morbid product could be easily scraped off, and brought to view the spongy tissue of the bone, destitute of cartilage as well as compact outer shell. The spongy tissue thus exposed, was red and softened, and could easily be penetrated by the scalpel. Small patches of cartilage still remained at the margins of the articular surfaces, which were only loosely adherent to the subjacent spongy tissue, the exterior shell having been absorbed.

Between the outer condyle and the small head of the humerus, a deep ulcerated excavation, capable of containing a white bean, had been formed. The surface of the posterior fossa of the humerus, lodging the olecranon, was rough and bare. The articular surface of the ulna presented similar appearances to the os humeri, with two or three superficial excavations at the bottom of the greater sigmoid fossa.

The surface of the coronoid process and of the olecranon, as well as the inner margin of the sigmoid fossa, are studded with spiculæ of newly-formed bony matter.

The head of the radius was more completely deprived of cartilage, and bony shell than the parts already noticed, and their place supplied by a thick layer of gelatinous deposit.

After the dressing of the wound, the limb was placed nearly at a right angle, on a flat splint padded with cotton, with a joint at the elbow allowing it to move edgewise. By means of this splint the arm was suspended from the ceiling after the patient was conveyed to his bed. This arrangement afforded great comfort; the limb swinging clear of his body, allowed him to vary his position within certain limits, an advantage he could not enjoy in any other way, compatible with perfect rest of the new joint. Sixty drops tinct. opii were then given.

At evening, about five hours after the operation, the patient began to suffer severe pain in the elbow, and the wound appeared distended with blood, which oozed from between the sutures. Thirty drops tinct. of opium, spirits mindereri \mathfrak{z} ss, were ordered to be repeated every two hours.

July 26. Patient suffers less pain; swelling of the elbow has increased, with tension and slight lividity of the surface; oozing of blood continues; removed two sutures, and an intermediate strap from the middle of the wound, and readjusted the bandages that had become too tight; pulse ninety-seven. Ordered light poultice of flax-seed meal.

At 6 P. M. Oozing of blood has ceased; complains of pain in the left hypochondrium, extending to the right side; no evacuation for forty-eight hours. R.—Tinct. opii gtts. xxx; ol ricini \mathfrak{z} i.—At 10 P. M. to take his anodyne draught of tinct. opii gtts. xxx; aq. menth. pip. \mathfrak{z} ss.

27. Has passed a good night; general appearance is improved; free from pain in the abdomen; pain in the arm slight; serous fluid oozes from the wound; swelling is not increased; pulse ninety-four, soft; tongue coated with whitish fur; bowels still confined. R.—Infus. sennæ comp.

28. Passed a good night after taking the same anodyne as the night previous; has had two evacuations following a laxative enema; pulse seventy-four; removing the dressings, the elbow appeared well, tension has diminished, swelling the same; reapplied only two adhesive straps; continued poultice.

29. Doing well; suppuration is commencing; five ligatures came away; omitted adhesive straps; continued poultice; bowels confined; pulse seventy-two; ordered *mistura eccoprotica*.

30. Pulse sixty-eight; one evacuation from the bowels; tension of the elbow still further diminished, as well as redness of the surface; one ligature came away; and removed one suture from each extremity of the wound.

31. Doing well, bowels confined, pulse seventy-four; removed two ligatures, and the remaining sutures were removed; ordered *pil. cathart.*, three.

Aug. 1. Tension and redness of the elbow have disappeared; the three remaining ligatures came away.

The farther progress of the case continued favourable, with the exception of an attack of erysipelas on the 17th Sept., which was, however, soon subdued. One or two collections of matter formed near the elbow, but after being opened, discharged and soon healed. The limb gradually acquired increased strength and facility of motion. The power of grasping bodies with the hand, which had been very much impaired by the disease, was recovered in a good degree; pronation and supination could be performed almost to the original extent; patient was able, unassisted, to raise the hand to the head, and could handle a broom in sweeping, carry half a pail of water, and perform other useful functions to his own great satisfaction. He was also sensible of progressing improvement in his limb. His general health was good; the only symptom of which he complained was a stricture across the chest. He was discharged this day, Feb. 1, 1845, to return to his family at Buffalo.

Dr. Buck remarks that the reason for preferring, in this case, the operation with a single longitudinal incision, to an incision in the form of the letter H, or to the crucial incision, more generally recommended by authorities, was with a view to preserve undivided the lateral connections of the tendon of the triceps with the fascia investing the forearm, which must necessarily be sacrificed by either of the other modes of operating. The important advantage of so doing was, that a point of action would be preserved for the triceps muscle, which might compensate in a good degree for the sacrifice of its connection with the olecranon. All the other essential objects of the operation, such as the preservation of the ulnar nerve, &c., were attained by this method, without any increased disturbance of the soft parts, or embarrassment in its several stages. The subsequent progress of the case could scarcely have been more favourable under any circumstances, and from the experience derived from this case, together with one reported in No. VIII. of *New York Medical and Surgical Journal* for April, 1841, in which the H incision was employed, I should be disposed decidedly to give preference to the method adopted in the present instance. Rather more time, perhaps, is required for this operation, but the great advantage already noticed should certainly be considered more than an equivalent.

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Statistics of the Medical Schools of the United States for the Session 1845-46.

	Students.	Graduates.
University of Pennsylvania - - -	462	168
Transylvania University - - -	171	58
Medical Institution of Geneva College - - -	179	39
Medical Department Willoughby University - - -	164	30
Albany Medical College - - -	115	42
Louisville Medical Institute - - -	345	73
Western Reserve College, (Cleveland) - - -	161	52
Jefferson Medical College - - -	469	170
Rush Medical College, (Chicago) - - -	50	9
Harvard University, Boston, - - -	180	31
College of Physicians and Surgeons, N. Y. - - -	219	38
Med. Dep. of University of the city of N. Y. - - -	425	131
Ohio Medical College - - -	192	46

University of Maryland	-	-	147	40
Medical College of Georgia	-	-	112	30
Med. Dep. of Hampden Sidney College	-	-	74	17
Med. Department University of Missouri	-	-	92	29
Med. Department Illinois College	-	-	-	13
St. Louis University	-	-	53	11
Med. Coll. of the State of South Carolina	-	-	210	74
University of the city of N. Y.	-	-	407	130
Indiana Medical College, (Laporte)	-	-	71	17
Berkshire Medical Institution	-	-	142	35
Medical College of Louisiana	-	-	103	19
Pennsylvania Medical College	-	-	70	38
Medical School of Maine	-	-	73	19
Vermont Medical College, (Woodstock)	-	-	-	24
Yale College	-	-	53	19
Castleton Medical College	-	-	140	36

Early Pregnancy.—Dr. J. B. WALKER, of East Stoughton, Mass., relates in the *Boston Med. & Surg. Journ.*, Sept. 9, 1846, a case in which the menstrual function was established at the age of 11½ years, and the patient was delivered of a living child when only 12 years and 8 months of age.

Ectrotic treatment of Small-pox by Tincture of Iodine.—Dr. SAMUEL JACKSON (late of Northumberland), was led in April, 1845, to make an experiment of aborting small-pox by the tincture of iodine, from contemplating its wonderful influence over erysipelas. He applied it to one arm of a child eleven months old, in confluent small-pox, on the third day of the eruption, and to the arm which appeared the worst, rubbing it freely on with a sponge, three times that day and twice the next. On the 11th day, when the pocks over the whole body were at their height, elevated with hard bases, those of the medicated arm were entirely flat, with thin, purulent matter under the dead cuticle, without any swelling of the part. There are, however, some very slight pits now to be seen, but they are very inconsiderable when compared with those on the other arm.

Drs. Goddard and Sargent have since tried the application.

Dr. Sargent used the iodine on one side of the face in twenty-five cases—"the swelling, soreness and tenderness were very much less than on the sides not covered; each pock remained flattened; but I cannot say that it prevented pitting."

Dr. Goddard writes that he tried the medicine in five cases—"not one of the patients shows the least pit or mark; none of them had been vaccinated, and the disease was confluent in most of them."

One advantage of this treatment, Dr. Jackson remarks, is, "that it removes the cuticle and leaves the part free from those disgusting discolorations which commonly remain for months."—*Med. Examiner*, Aug. 1846.

Medical Rank in the Navy.—The late Secretary of the Navy, Mr. Bancroft, just before retiring from office, issued the following General Order, which will be gladly received by the medical officers in the navy.

"GENERAL ORDER.

"Surgeons of the fleet, and surgeons of more than twelve years, [date of commission,] will rank with commanders.

"Surgeons of less than twelve years with lieutenants.

"Passed-assistant surgeons, next after lieutenants.

"Assistant surgeons, not passed, next after masters.

"Commanding and executive officers, of whatever grade, when on duty, will take precedence of all medical officers.

"This order confers no authority to exercise military command, and no additional right to quarters.

GEORGE BANCROFT.

"Navy Department, August 31st, 1846."

According to this order, by reference to the Navy Register, we find the following named surgeons will now rank with commanders in the navy.

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|-----------------------|----------------------------|
| 1 Jonathan Cowdry. | 18 George Terrill. |
| 2 Wm. P. C. Barton. | 19 Edmund L. Du Barry. |
| 3 Thomas Harris. | 20 Waters Smith. |
| 4 Wm. Turk. | 21 Benjamin F. Bache. |
| 5 John A. Kearney. | 22 Thomas Dillard. |
| 6 Bailey Washington. | 23 Stephen Rapalje. |
| 7 Wm. Swift. | 24 James M. Greene. |
| 8 Thomas B. Salter. | 25 Benjamin R. Tinslar. |
| 9 Peter Christie. | 26 George W. Codwise. |
| 10 Samuel Jackson. | 27 Gustavus R. B. Horner. |
| 11 Thomas Williamson. | 28 W. S. W. Ruschenberger. |
| 12 Benajah Ticknor. | 29 William Johnson. |
| 13 James Cornick. | 30 Samuel Mosely. |
| 14 Charles Chase. | 31 Robt. J. Dodd. |
| 15 David S. Edwards. | 32 Wm. Fairlie Patton. |
| 16 Isaac Hulse. | 33 John F. Brooke. |
| 17 John S. Wily. | |

The following named surgeons will now rank with lieutenants in the navy.

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|------------------------|--------------------------|
| 1 William Whelan. | 19 Samuel C. Lawrason. |
| 2 Samuel Barrington. | 20 Edward Gilchrist. |
| 3 Thomas L. Smith. | 21 John A. Lockwood. |
| 4 George Blacknall. | 22 Daniel C. M'Leod. |
| 5 H. N. Glentworth. | 23 Lewis W. Minor. |
| 6 Lewis B. Hunter. | 24 Wm. J. Powell. |
| 7 John C. Spencer. | 25 J. Frederick Sickels. |
| 8 George Clymer. | 26 N. C. Barrabino. |
| 9 Isaac Brinkerhoff. | 27 Henry S. Reynolds. |
| 10 Wm. Maxwell Wood. | 28 M. G. Delaney. |
| 11 John Vaughan Smith. | 29 Wm. F. M'Clenahan. |
| 12 Jones W. Plummer. | 30 Wm. L. Van Horn. |
| 13 George B. M'Knight. | 31 Daniel S. Green. |
| 14 Solomon Sharp. | 32 James C. Palmer. |
| 15 Daniel Egbert. | 33 Ninian Pinkney. |
| 16 Amos G. Gambrill. | 34 Robt. T. Barry. |
| 17 W. A. W. Spotswood. | 35 Charles A. Hassler. |
| 18 Jonathan M. Foltz. | 36 David Harlan. |

The youngest surgeon on this list of those who rank with lieutenants, has been nearly twelve years in the navy, and under the order must serve upwards of eleven years more, before he will rank as a commander.